

**ABSTRACT**

High bandwidth network access is extended to vehicles and passengers on vehicles. The network is extended to a vehicle by way of one or more intermediate nodes, which may be other vehicles or signal relays. In order to acquire the vehicles to which to extend the network, route data is provided to the intermediate nodes and to the vehicles. Computers on-board the vehicles and intermediate nodes determine which pairs of vehicles and intermediate nodes should establish links to form a network based on the route data and link scoring. The vehicles and intermediate nodes then control directional antennas to point at each other based on the route data and the scoring to establish the links.